

REMARKS

Claims 1-32, 37-39, 41-61, 63-88, and 91-97 are pending in the present application. In the office action mailed May 3, 2004 (the "Office Action"), claim 14-22, 41-48, 52-61, 64-85, 87, 88, and 92 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,501,483 to Wong *et al.* (the "Wong patent"). Claims 1-13, 23-32, 37-39, 49-51, 63, 86, 91, and 93-97 were rejected under 35 U.S.C. 103(a) as being anticipated by the Wong patent in view of Don P. Mitchell, "Generating Antialiased Images at Low Sampling Densities," Computer Graphics, Vol. 21, No. 4, July 1987, pp. 65-72 ("the Mitchell reference") and Mark A. Z. Dippe *et al.*, "Antialiasing Through Stochastic Sampling," SIGGRAPH, Vol. 19, No. 3, 1985, pp. 69-78 ("the Dippe reference").

In maintaining the rejection of the claims, the Examiner provided remarks directed to the previously filed response of January 6, 2004 on pages 50-53 of the Office Action. The following comments address the Examiner's remarks.

In maintaining the rejection of claims 14-22, 41-48, 52-61, 64-85, 87, 88, and 92 under 35 U.S.C. 102(e), the Examiner has argued that the Wong patent "at least suggests" the combination of limitations recited in the rejected claims. The Examiner has essentially acknowledged that the combination of limitations recited in the claims are *not disclosed* in the Wong patent. A *prima facie* case of anticipation requires that a reference expressly or inherently disclose every limitation of the combination of limitations recited by a claim. Disclosure of the limitations, either expressly or inherently, goes beyond the level of "at least suggests" the combination of limitations. Although a reference may be relied upon for all that it would have *reasonably* suggested to one having ordinary skill in the art, the Wong patent does not provide this level of disclosure. As explained in the Manual of Patent Examining Procedure, Edition 8, Revision 1, Section 2123, the suggested limitation is still based on subject matter that is *disclosed* in the cited reference. That is, the reference may teach away from using the limitation, but the disclosure of the limitation as being inferior can nevertheless be used as the basis of teaching the limitation. This is not the case with respect to the Wong patent and the limitations recited in the claims. The Wong patent does not expressly or inherently disclose the limitations the Examiner believes are suggested, either as part of the invention, or as known in the prior art.

In arriving at the conclusion that the Wong patent anticipates the claims, the Examiner makes reference to several different figures that describe the invention disclosed in the

Wong patent and argues that based on this information, the combination of limitations claimed are suggested. The Examiner further cites to a comment at col. 5, lines 58-59 to support the assumption. None of the material in the Wong patent cited by the Examiner, however, expressly or inherently discloses the limitations recited in the claims. For example, as discussed in the previously submitted responses, the Wong patent does not disclose using more than one sampling pattern for super-sampling the pixels of an image. The Examiner has referenced Figure 1-5 as teaching a variety of different sampling patterns. However, the Wong patent describes different sampling patterns to merely provide examples of the sampling patterns that can be used for all of the pixels of an image. The subjectivity which the Examiner has referenced is with respect to which *one* of the different sampling patterns should be selected for super-sampling the pixels of an image. As expressly stated in the Wong patent, one technique for selecting an appropriate sampling pattern is to generate every possible permutation of sampling patterns for a number of subpixels per pixel and a number of super-samples per pixel, and “then choose the *one* that provides the most uniform sampling of a multiple of pixels.” See col. 5, lines 62-66 (emphasis added). The Wong patent never discloses that using a plurality of sampling patterns for pixels of the image is either part of the invention, or is part of the prior art, undesirable or otherwise. Without disclosing the limitation, the Wong patent cannot reasonably suggest the limitation.

Failing to establish that the Wong patent discloses the claimed limitations, the Examiner is forced to characterize the Wong patent as “suggesting” the claimed limitations. This, however, is insufficient to establish a *prima facie* case of anticipation. Thus, based on the Examiner’s own argument, the Wong patent fails as an anticipatory reference for the rejected claims. Therefore, the rejection of the claims 14-22, 41-48, 52-61, 64-85, 87, 88, and 92 under 35 U.S.C. 102(e) must be withdrawn.

The Examiner further maintains the rejection of claims 1-13, 23-32, 37-39, 49-51, 63, 86, 91, and 93-97 under 35 U.S.C. 103(a) over the Wong patent in view of the Mitchell and Dippe references. In addition to the previous discussion regarding the deficiencies of the Wong patent, the Examiner’s reliance on the Mitchell reference is problematic as well. With reference to the Mitchell reference, the Examiner argues that “[i]t is *conceivable* that with a proper choice of the distance for rejecting or accepting each subsequent sample location, the super-sampling patterns can be altered for consecutive pixels.” See the Office Action at pages 51-52 (emphasis

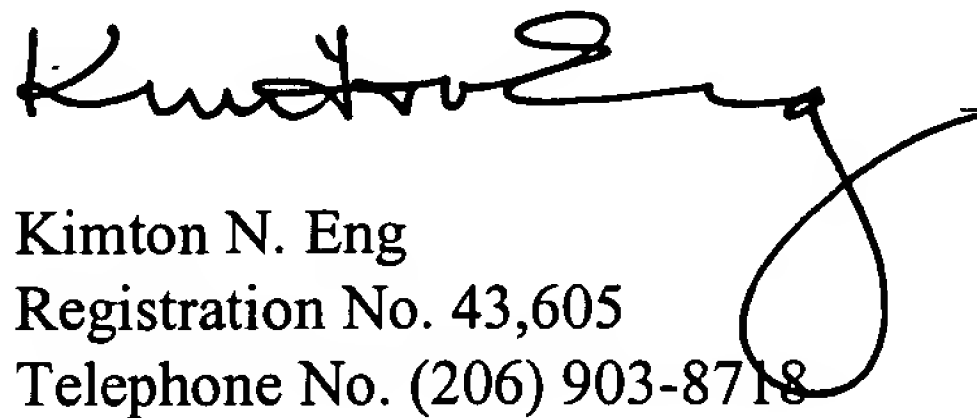
added). However, in making this statement, the Examiner has ignored the teachings of the Mitchell reference as a whole. That is, the Mitchell reference is directed to teaching a *non-uniform* sampling method by approximating Poisson-disk sampling. The sample locations per pixel are selected based on the Poisson distribution so that the sample pattern for each pixel is different enough to avoid the problems associated with uniform sampling patterns. See the Mitchell reference, pages 65-66. For the Examiner to state that the Mitchell reference can be used for providing alternating between first and second sampling patterns directly contradicts the teaching of the Mitchell reference.

Moreover, the Examiner further states that the Mitchell reference discloses a reconstruction filter having a filter kernel that can be “constructed as an alternating function such as a sinc filter with a Hamming window.” See the Office Action, page 52. This statement, however, is inaccurate. A sinc filter with a Hamming window is not an alternating function. As described in the Mitchell reference, the sinc filter is used as a low pass filter to remove high-frequency noise resulting from resampling the non-uniform samples in reconstructing a digital image. See the Mitchell reference page 67. The Examiner is requested to provide the basis for this statement if the rejection of these claims is maintained.

Thus, not only does the Wong patent fail to disclose the limitations for which it has been cited, those ordinarily skilled in the art would not have been motivated to modify the teachings of the Wong patent with the teachings of the Mitchell reference since the Mitchell reference expressly teaches away from the sampling method disclosed in the Wong patent. Additionally, even if the teachings were combined, the Mitchell reference does not teach the limitations for which it has been cited. The Dippe reference, as discussed in the previously submitted responses, does not make up for the deficiencies of the Wong patent and the Mitchell reference. Consequently, the rejection of claims 1-13, 23-32, 37-39, 49-51, 63, 86, 91, and 93-97 under 35 U.S.C. 103(a) must be withdrawn.

All of the claims pending in the present application are in condition for allowance.
Favorable consideration and a Notice of Allowance are earnestly solicited.

Respectfully submitted,
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Enclosures:

- Postcard
- Check
- Fee Transmittal Sheet (+ copy)
- Supplemental Information Disclosure Statement (+ copy)
- Form PTO-1449 with Cited References (2)
- Copy of Related Application (1)

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